AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application. Please amend claims 1 and 8 as follows:

LISTING OF CLAIMS:

1.   (Currently Amended) A demand-supply scheme planning apparatus comprising:

first means for storing data regarding a cost and a time that are needed between a purchase step and a supply step of each demand-supply step of a supply chain in which a plurality of demand-supply steps each having an order receipt step, an order placement step, a purchase step, and a supply step that are related to a commodity;

second means for inputting an order receipt scheme of a demand-supply step of the plurality of demand-supply steps that is located at a supply-side terminal of the supply chain;

third means for determining scheme data regarding the order receipt step, the order placement step, the purchase step, and the supply step of each of the plurality of demand-supply steps based on the order receipt scheme inputted and a predetermined parameter;

fourth means for calculating a profitability index of the supply chain based on the scheme data determined and the data stored by the first means;

fifth means for changing the predetermined parameter; and

sixth means for setting, as a demand-supply scheme, scheme data that maximizes the profitability index calculated by the fourth means, of the scheme data determined by the third means using the parameter changed.

2.   (Original) An apparatus according to claim 1, wherein the commodity includes a product and a part.

3.   (Original) An apparatus according to claim 1, wherein the commodity include a service.

4.   (Original) An apparatus according to claim 1, wherein the third means determines an amount of order placement of the demand-supply step, based on at least an amount of order receipt, an amount of stock, and a target amount of stock of the demand-supply step.

5.   (Original) An apparatus according to claim 4, wherein the parameter includes the target amount of stock, and the fifth means changes the target amount of stock.

6.   (Original) An apparatus according to claim 1, wherein the first means further stores data regarding an order-receivable amount of each demand-supply step, and the fifth means changes a parameter regarding order receipt, as one of the predetermined parameter, within the order-receivable amount.

7.   (Original) An apparatus according to claim 1, wherein the fifth means changes a parameter that sets a starting timing of the order placement step.

8.   (Currently Amended) A program stored on a computer readable medium, for a demand-supply scheme planning method, comprising the steps of:

storing first data regarding a cost and a time that are needed between a purchase step and a supply step of each demand-supply step of a supply chain in which a plurality of demand-supply steps each having an order receipt step, an order placement step, a purchase step, and a supply step that are related to a commodity;

inputting an order receipt scheme of a demand-supply step of the plurality of demand-supply steps that is located at a supply-side terminal of the supply chain;

determining scheme data regarding the order receipt step, the order placement step, the purchase step, and the supply step of each of the plurality of demand-supply steps based on the order receipt scheme inputted by sequentially changing a variable parameter;

calculating a profitability index of the supply chain based on the scheme data determined and the first data;

changing a value of the variable parameter; and

setting, as a demand-supply scheme, scheme data that maximizes the profitability index calculated, of the scheme data determined using the variable parameter.

9.   (Previously Presented) A program according to claim 8, wherein the commodity includes a product and a part.

10.   (Previously Presented) A program according to claim 8, wherein the commodity include a service.

11.   (Previously Presented) A program according to claim 8, further comprising determining an amount of order placement of the demand-supply step, based on at least an amount of order receipt, an amount of stock, and a target amount of stock of the demand-supply step.

12.   (Previously Presented) A program according to claim 11, wherein the parameter includes the target amount of stock.

13.   (Previously Presented) A program according to claim 8, further comprising:

storing data regarding an order-receivable amount of each demand-supply step; and

changing a parameter regarding order receipt, as one of the variable parameter, within the order-receivable amount.

14.   (Previously Presented) A program according to claim 8, further comprising changing a parameter that sets a starting timing of the order placement step.

15.   (Previously Presented) A computer programmed to perform the program according to claim 8.

16.   (Canceled)

17.   (Original) A demand-supply scheme planning apparatus comprising:

first means for storing first data regarding a cost and a time that are needed between purchase of the product or a part and shipment of the product in each demand-supply step of supply chain in which a plurality of demand-supply steps, second data regarding a transportation cost involved in the shipment of the product and a time needed for transportation of the product, and third data regarding targets of stock of the product and the member of each demand-supply step, wherein the each demand-supply step places an order for a product or a member for producing the product upon receiving an order for the product, and that ships the product purchased in accordance with the order placed or that produces and ships the product using the member purchased in accordance with the order placed;

second means for inputting stock records of the product and the member of each demand-supply step of the supply chain;

third means for inputting an order receipt scheme of the product of a demand-supply step located at a shipment-side terminal of the supply chain;

fourth means for calculating a profitability index of the supply chain based on scheme data regarding order receipt, order placement, purchase and shipment of

each demand-supply step, and the first and second data stored by the first means; and

fifth means for setting the scheme data regarding order receipt, order placement, purchase and shipment of each demand-supply step so as to increase the profitability index, based on the order receipt scheme inputted and the stock record inputted, and the third data stored by the first means.

18.   (Original) An apparatus according to claim 17, wherein the fifth means determines a deviation between a value obtained by subtracting the order receipt scheme of the demand-supply step located at the shipment-side terminal from the stock record of the demand-supply step and the stock target value of the demand-supply step, as an amount of order placement, and distributing the amount of order placement as order placement to a demand-supply step where the order placement from the demand-supply step at the shipment-side terminal is possible, in such a manner that a profit increases, based on the first and the second data stored by the first means.

19.   (Original) An apparatus according to claim 17, further comprising:

sixth means for setting an order receivable range of each demand-supply step based on a fourth data regarding a product order receivable range of each demand-supply step stored in data stored by the first means; and

seventh means for determining appropriateness of each demand-supply step based on the order receivable range set by the sixth means and the order receipt of each demand-supply step set by the fifth means.

20.   (Original) An apparatus according to claim 19, wherein the seventh means determines whether a processing capability of each demand-supply step is excess or insufficient.

21.   (Original) An apparatus according to claim 17, further comprising:

sixth means for setting an order receivable range of each demand-supply step based on a fourth data regarding a product order receivable range of each demand-supply step stored in data stored by the first means; and

seventh means for determining whether the order receipt of each demand-supply step set by the fifth means is within the order receivable range set for the corresponding demand-supply step by the sixth means; and

eighth means for, if the seventh means determines that the order receipt is not within the order receivable range, changing the scheme data set by the fifth means so that the order receipt of the demand-supply step subjected to the determination becomes within the corresponding order receivable range.

22.   (Original) An apparatus according to claim 21, wherein the eighth means switches a portion or a whole amount of the order receipt of the demand-supply step subjected to the determination to order receipt of a demand-supply step that is capable of shipping a product identical to that shipped by the demand-supply step subjected to the determination.

23. (Previously Presented) An apparatus according to claim 21, wherein the seventh means changes, in time, at least an amount of the order receipt of the demand-supply step subjected to the determination relative to the order receipt scheme.

24. (Previously Presented) An apparatus according to claim 23, wherein the seventh means determines whether a sum of the changed order receipt and the order receipt set by the fifth means is within the order receivable range set by the sixth means, if the eighth means accomplishes order receipt changing, in time, at least an amount of the order receipt.

25. (Original) An apparatus according to claim 21, wherein the eighth means changes at least a portion of the third data of each demand-supply step stored by the first means.

26. (Original) An apparatus according to claim 21, wherein the eighth means changes the scheme data so that the order receipt of each demand-supply step becomes within the corresponding order receivable range and so that the profitability index increase.

27. (Original) An apparatus according to claim 17, further comprising output means for outputting the scheme data set by the fifth means.

28.   (Previously Presented) A program stored on a computer readable medium, for a demand-supply scheme planning method comprising the steps of:

storing first data regarding a cost and a time that are needed between purchase of the product or a part and shipment of the product in each demand-supply step of supply chain in which a plurality of demand-supply steps, second data regarding a transportation cost involved in the shipment of the product and a time needed for transportation of the product, and third data regarding targets of stock of the product and the member of each demand-supply step, wherein the each demand-supply step places an order for a product or a member for producing the product upon receiving an order for the product, and that ships the product purchased in accordance with the order placed or that produces and ships the product using the member purchased in accordance with the order placed;

inputting stock records of the product and the member of each demand-supply step of the supply chain;

inputting an order receipt scheme of the product of a demand-supply step located at a shipment-side terminal of the supply chain;

calculating a profitability index of the supply chain based on scheme data regarding order receipt, order placement, purchase and shipment of each demand-supply step, and the first and second data stored by the first means; and

setting the scheme data regarding order receipt, order placement, purchase and shipment of each demand-supply step so as to increase the profitability index, based on the order receipt scheme inputted and the stock record inputted, and the third data stored by the first means.

29.   (Canceled)

30.   (Withdrawn) A scheme planning system that plans a sales scheme or

a production scheme of each of a plurality of locations through exchange of

information regarding a number of material flow between scheme planning

apparatuses which are disposed respectively in the locations and which are

connected in accordance with material flow, the scheme planning system

comprising:

scheme processing means for planning a scheme regarding order receipt,

placement and sales or production are provided corresponding to schemes to be

planned in each location, wherein each scheme processing means is settable with a

restricting condition regarding at least sales, production and material flow.

31.   (Withdrawn) A scheme planning system that plans a sales scheme or

a production scheme of each of a plurality of locations connected in accordance with

a material flow, through exchange of information regarding a number of the material

flow between scheme planning apparatuses that are disposed respectively in the

locations, the scheme planning system comprising:

a plurality of scheme planning apparatus comprising:

first means for planning an order receipt scheme by determining a number of

articles requested of a location concerned from a post-location located at a later

stage in a material flow path, as a scheme number of order receipt;

second means for planning a sales scheme or a production scheme by

determining a scheme number of sales/production of the location concerned based

on the scheme number of order receipt from the order receipt scheme processing means;

third means for planning an order placement scheme by determining a number of articles requested of a pre-location located at an earlier stage in the material flow path, as a scheme number of order placement, in order to realize the sales/production scheme planned by the second means;

fourth means for planning a shipment scheme by determining a number of articles shipped from the step concerned to the post-step, as a scheme number of shipment; and

fifth means for planning a purchase scheme by determining a number of purchase sent from the pre-location to the location concerned, as a scheme number of purchase,

wherein the first, second, third, fourth and fifth means determine the scheme number in accordance with a restricting condition that is set individually for the first, second, third, fourth and fifth means regarding at least sales, production and material flow.

32. (Withdrawn) A system according to claim 31, wherein

the scheme planning apparatus further comprising:

the sixth means for retaining a number of articles that cannot be processed within a scheme object period, of the number of articles that are determined the sales/production scheme processing means and that are requested from the post-location, as a number of order receipt balance, wherein

the sixth means determines a scheme number of sales/production during the scheme object period, taking into consideration the number of order receipt balance of a period immediately prior to the scheme object period.

33.　(Withdrawn) A system according to claim 31, wherein

the scheme planning apparatus further comprising:

sixth means for retaining a number of articles that are not shipped to the post-step within a scheme object period, of the scheme number of sales or the scheme number of production determined the second means, as a number of stock, wherein the second means determines a scheme number of sales/production during the scheme object period, taking into consideration the number of stock of a period immediately prior to the scheme object period.

34.　(Withdrawn) A scheme planning method for planning a sales scheme or a production scheme of each of a plurality of locations connected in accordance with a material flow, through exchange of information regarding a number of the material flow between the locations, the scheme planning method comprising the steps of:

(A) determining a number of articles requested of a location concerned from a post-location located at a later stage in a material flow path, as a scheme number of order receipt;

(B) planning a sales scheme or a production scheme by determining a scheme number of sales/production of the location concerned based on the scheme number of order receipt from the (A)step;

(C) determining a number of articles requested of a pre-location located at an earlier stage in the material flow path, as a scheme number of order placement, in order to realize the sales scheme or the production scheme planned by the (B)step;

(D) planning the sales/production scheme of each location sequentially in a direction from a post-location to a pre-location by receiving the scheme number of order receipt from an immediate post-location, and giving the scheme number of order placement to an immediate pre-location.

35.   (Withdrawn) A scheme planning method according to claim 34, further comprising the steps of:

(E) determining a number of purchase sent from the pre-location to the location concerned, as a scheme number of purchase; and

(F) determining a number of articles shipped to the post-step, as a scheme number of shipment, wherein

that the (B)step re-plans a sales/production scheme, and sequentially corrects the scheme number of order receipt and the scheme number of order placement based on the sales/production scheme corrected by re-planning, if it is determined that the sales/production scheme planned cannot be accomplished based on the scheme number of purchase determined in the (E)step.

36.   (Previously Presented) An apparatus according to claim 1, further comprising an adjustment means for adjusting a distribution of the scheme data regarding the order receipt step, the order placement step, the purchase step and

the supply step for each of the plurality of demand-supply steps to maximize the profitability index as a whole supply chain.

37.   (Previously Presented) A program according to claim 8, further comprising the step of adjusting a distribution of the scheme data regarding the order receipt step, the order placement step, the purchase step and the supply step for each of the plurality of demand-supply steps wherein the profitability index as a whole supply chain is maximized.

38.   (Previously Presented) An apparatus according to claim 17, wherein said fifth means adjusts the scheme data regarding order receipt, order placement, purchase and shipment of each demand-supply step to maximize the profitability index.

39.   (Previously Presented) A program according to claim 28, further including the step of adjusting the scheme data regarding order receipt, order placement, purchase and shipment of each demand-supply step to maximize the profitability index.